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CATCH FOR NECKLACES

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4 Claims. (Cl. 24-211)

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This invention relates to a safety catch for necklaces or the like.

Broadly, it is an object of the invention to provide a safety catch for use with necklaces which will not readily separate under general wearing conditions but which must be manually operated with the thumb and another finger of the hand. In other words, the ends of the necklace will be securely held together without danger of accidental separation and consequential loss of the necklace.

More particularly, it is an object of the invention to provide a safety catch for necklaces which will release and eject one part, that is the male portion, of the catch upon opposed pressure of opposed projecting lugs so that the clasp cannot accidentally become unlocked unless the double locking means of the clasp is compressed.

For a fuller understanding of the nature and objects of the invention, reference is had to the following detailed description in connection with the accompanying drawing, in which:

Fig. 1 is a plan view of the clasp.

Fig. 2 is a plan view, parts being broken away to show the inner structure and parts being shown in section, and showing the male member inserted within the housing of the clasp.

Fig. 3 is a plan view of the clasp with one wall removed, parts being shown in section and with the male member in ejected position.

Fig. 4 is a sectional view taken through line 4-4 of Fig. 1.

Referring to the drawing, numeral 10 represents a clasp preferably made of metal and rectangular in form, having a housing 20 comprising two opposed walls 11 and 12, which are herein called a top and bottom, respectively, for the purpose of description, a back 13, a front 14, end walls 28-29, a fastening dog 15, a bottom fastening dog 16, and a male member 17 comprising an insertable projecting male member 18 and a plate 19 at right angles thereto.

The housing 20 has a pair of parallel walls 21-22 in its central portion providing a central longitudinal compartment 23 within which a movable block 24 rides against the pressure of spring 25. Projecting from the central front face of block 24 there is a V-shaped member 30 which receives the V-shaped end of male member 18 when it is inserted within the clasp housing 20.

A transverse wall 26, between the back 13 and front 14, provides a transverse channel 27 adjacent the front 14 for the opposed dogs 15 and 16 to move. Each end wall 28-29 has a square opening 31-32 adjacent the front 14 and aligned

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with the channel 27 to permit the projecting end of the dogs to pass, as shown in the figures. The front 14 has a rectangular opening 33 in its central part aligned with the compartment 23 to permit the male member 18 to enter the housing. Wall 11 and back 12 each have a small rectangular opening or slot 34-35, respectively, aligned over the transverse channel 27, for the purpose hereinafter described.

The pair of opposed fastening dogs 15-16 are located within the channel 27 with their ends projecting through openings 31-32, respectively and beyond the end walls 28-29 of the housing 20. The top ends of the dogs 15-16 are grooved, as shown at 36-37, to prevent the finger nails from sliding off the dogs 15-16.

The dogs 15-16 are substantially square in cross-section with hollow portions 38-39 at the projecting ends within which one end compression springs 40-41 are seated. The opposite ends of springs 40-41 are seated upon the outside bottom ends 42-43 respectively, of dogs 15-16. Each dog 15-16 has three short walls, that is, the front and side walls at the projecting end, and a long back wall 44-45, and a bottom 42-43. Each bottom 42-43 has a projecting pin 46-47, respectively, which slides within slots 48-49 of long walls 44-45, respectively, the ends of the slot opposite the dog acting as a stop in both directions for the said opposite dog. The openings 34-35 are in alignment with slots 48-49 so that the pins 46-47 pass through both aligned slots 48-34 and 49-35, respectively. The bottom 43 of the top dog 15 is lower than the bottom 42 of the bottom dog 16 providing a space 50 which is less in height than the rectangular front opening 33, that is, the bottoms 42-43 partially cover the opening 33 when the male member 17 is not within the housing 20, as shown in Fig. 3.

The male member 17 has the plate 19 of the same size as the front 14 and is adapted to cover the front 14 when member 17 is completely within housing 20. Projecting at right angles from the center of plate 19 is insertable male member 18 which is slightly less in thickness and height than the opening 33 to permit it to enter opening 33 and which has an arrow-like head 51. Behind head 51 there are slots 52-53 providing shoulders 54-55 and a back projection 56 which is of the same width as the front 14 and fills the opening 33 when the member 17 is fully inserted.

When the projecting male member 18, which is slightly less in height than the opening 33 is inserted through opening 33, the arrow-like

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head 51 spreads apart the bottoms 42—43 of the dogs 16—15 respectively, against compression springs 40—41 permitting the head 51 to enter the longitudinal compartment 23, as shown in Fig. 2, that is, the arrow-like head 51 crowds back the dogs from in front of the opening 33 until the shoulders 54—55 have passed the bottoms 42—43. As soon as the shoulders 54—55 have passed the bottoms 42—43 of the dogs 15—16, the compression springs 40—41 depress the bottoms 42—43 causing them to spring in opposite directions and fall into the slots 52—53 of the male member 18. The shoulders 54—55 will prevent the male member 18 from being withdrawn from housing 20. The head 51, when it is inserted into channel or compartment 23 depresses the V-shaped member 30 and the block 24 against the spring 25.

In order to release the male member 17 from its housing 20, it is necessary to compress both of the dogs 15—16 simultaneously. This will cause the bottoms 42—43 of the dogs 15—16 to reciprocate away from each other freeing the male member 18 which is then automatically ejected by the block 24 and member 30 which had been under compression.

The back 13 and plate 19 each have a ring 57—58, respectively, attached thereto by any well-known means, such as soldering or brazing to which the opposed ends of a necklace 59 or other article of jewelry may be attached by well-known means.

The top 11 has been shown attached to the housing 20 by pins 60 for illustrative purposes only, however, it may be attached by any well-known means and may also be formed integral with the housing.

It is obvious that various changes and modifications may be made in the details of construction and arrangement of parts without departing from the general spirit of the invention.

We claim:

1. In a clasp for neck-pieces comprising a housing having a front, a central longitudinal channel and a transverse channel adjacent one end of said housing, a block within said central channel movable against a compression spring, opposed hollow dogs within said transverse channel reciprocally movable towards and away from each other against compression springs therein, the ends of said dogs extending beyond said housing to permit said dogs to be pressed toward one another by the fingers of the hand, aligned slots in said housing and said dogs, pins projecting from the inner ends of said dogs through said aligned slots, an opening in said front, the inner ends of said dogs being past the central longitudinal medial line of said housing, said inner ends of said dogs adapted to partially cover said front opening when said dogs are in normal position, a male member adapted to be inserted into said opening against said movable block, said male member having an enlarged tapered head which spreads said inner ends of said dogs against spring pressure when inserted into said housing and when said head passes said inner ends of said dogs said dogs spring in opposite directions and engage said male member to lock it within said housing.

2. In a clasp for neck-pieces comprising a housing having a front, a longitudinal central channel and a transverse channel adjacent one end of said housing, said transverse channel communicating with said central channel, a block within

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said central channel movable against a compression spring, opposed hollow dogs within said transverse channel reciprocally movable towards and away from each other against compression springs therein, the ends of said dogs extending beyond said housing to permit said dogs to be pressed toward one another by the fingers of the hand, aligned slots in said housing and said dogs, pins projecting from the inner ends of said dogs through said aligned slots, an opening in said housing front, the inner ends of said dogs being past the central longitudinal medial line of said housing and adapted to partially cover said front opening when said dogs are in normal position, a male member adapted to be inserted into said opening against said movable block, said male member having an enlarged tapered head with opposed shoulders, said head spreading said inner ends of said dogs against spring pressure and when said head passes said inner ends of said dogs said dogs will spring in opposite directions and engage said male member at said shoulders to lock it within said housing.

3. In a clasp for neck-pieces comprising a housing having a front, a longitudinal central channel and a transverse channel adjacent one end of said housing, said transverse channel communicating with said central channel, a block having a projecting V-shaped member within said central channel movable against a compression spring, opposed hollow dogs within said transverse channel reciprocally movable towards and away from each other against compression springs therein, the ends of said dogs extending beyond said housing to permit said dogs to be pressed toward one another by the fingers of the hand, aligned slots in said housing and said dogs, pins projecting from the inner ends of said dogs through said aligned slots, an opening in said housing front, the inner ends of said dogs being past the central longitudinal medial line of said housing providing a space therebetween, said inner ends of said dogs adapted to partially cover said front opening when said dogs are in normal position, a male member adapted to be inserted into said opening against said movable V-shaped member, said male member having an enlarged tapered head which spreads said inner ends of said dogs against spring pressure when inserted through said opening and when said head passes said inner ends of said dogs said dogs will spring in opposite directions and engage said male member to lock it within said housing.

4. In a clasp for neck-pieces comprising a housing having a front, a longitudinal central channel and a transverse channel adjacent said front of said housing, said transverse channel communicating with said central channel, a block having a projecting V-shaped member projecting into said transverse channel when in extended position, said block within said central channel movable against a compression spring, opposed hollow dogs within said transverse channel reciprocally movable towards and away from each other against compression springs therein, the ends of said dogs extending beyond said housing to permit said dogs to be pressed toward one another by the fingers of the hand, aligned slots in said housing and said dogs, pins projecting from the inner ends of said dogs through said aligned slots, said slots in said housing acting as stops for said dogs, an opening in said housing front, the inner ends of said dogs being past the central longitudinal medial line of said housing providing a space

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therebetween, said inner ends of said dogs adapted to partially cover said front opening when said dogs are in normal position, a male member having opposed shoulders and slots and adapted to be inserted into said opening between said inner ends of said dogs and against said movable block, said male member having an enlarged tapered head which spreads said inner ends of said dogs against spring pressure when inserted through said opening and when said head passes said inner ends of said dogs said dogs will spring in opposite directions to cause said inner ends to enter said slots of said male member and engage said male member locking it within said housing whereby upon compression of said opposed dogs said male

member will be automatically ejected from said housing.

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The following references are of record in the file of this patent:

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